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SINCE 1975

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INSTRUCTIONS

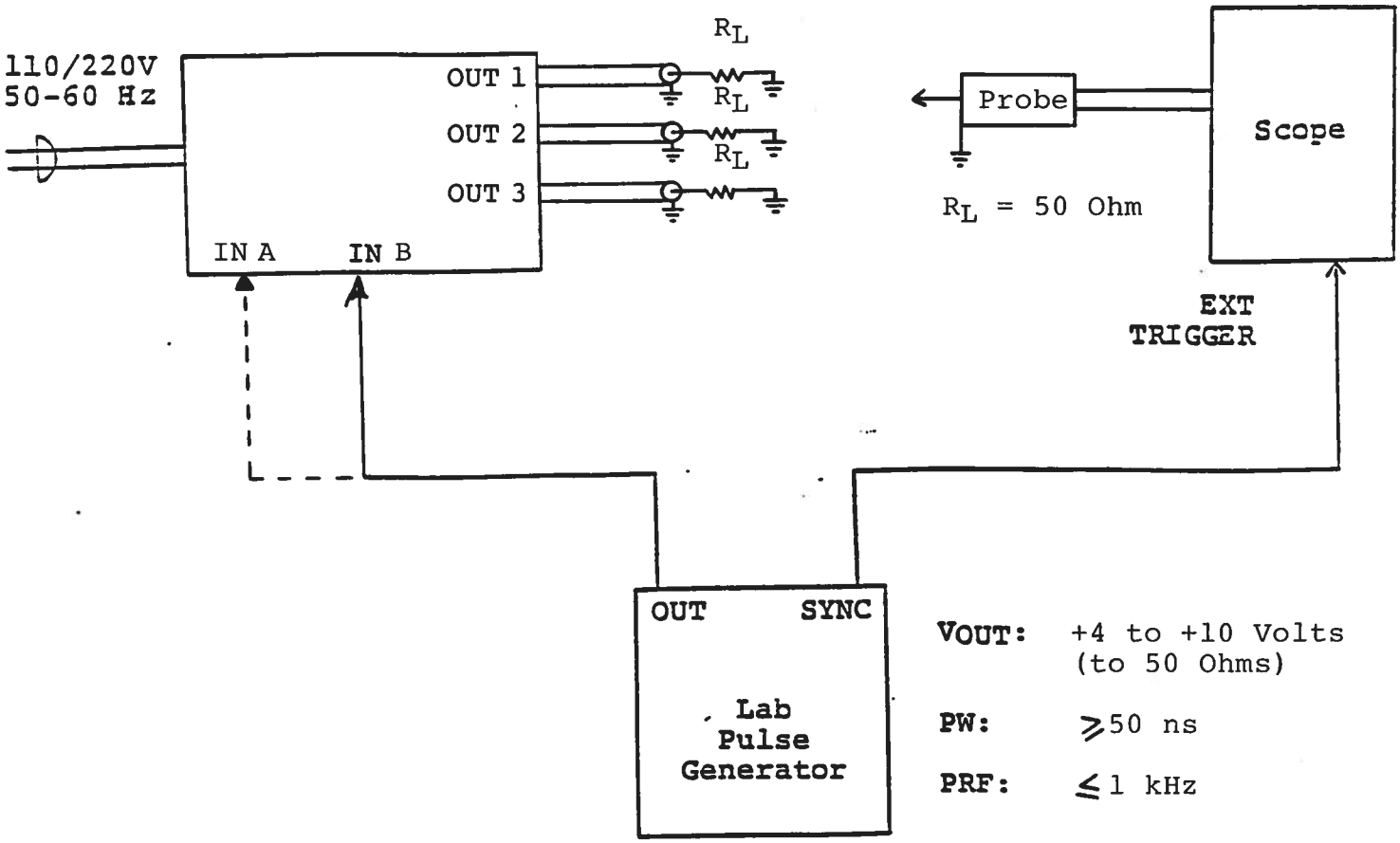
MODEL AVX-D3-PS-FOICB DELAY GENERATOR

S.N.:

WARRANTY

Avtech Electrosystems Ltd. warrants products of its manufacture to be free from defects in material and workmanship under conditions of normal use. If, within one year after delivery to the original owner, and after prepaid return by the original owner, this Avtech product is found to be defective, Avtech shall at its option repair or replace said defective item. This warranty does not apply to units which have been dissembled, modified or subjected to conditions exceeding the applicable specifications or ratings. This warranty is the extent of the obligation or liability assumed by Avtech with respect to this product and no other warranty or guarantee is either expressed or implied.

Fig. 1 PULSE GENERATOR TEST ARRANGEMENT



GENERAL OPERATING INSTRUCTIONS

1) The equipment should be connected in the general fashion shown above. Since the unit provides an output pulse rise time as low as 50 ns a fast oscilloscope (at least 50 MHz and preferably 200 MHz) should be used to display the waveform.

2) The basic timing waveforms should resemble those shown in Fig. 2.

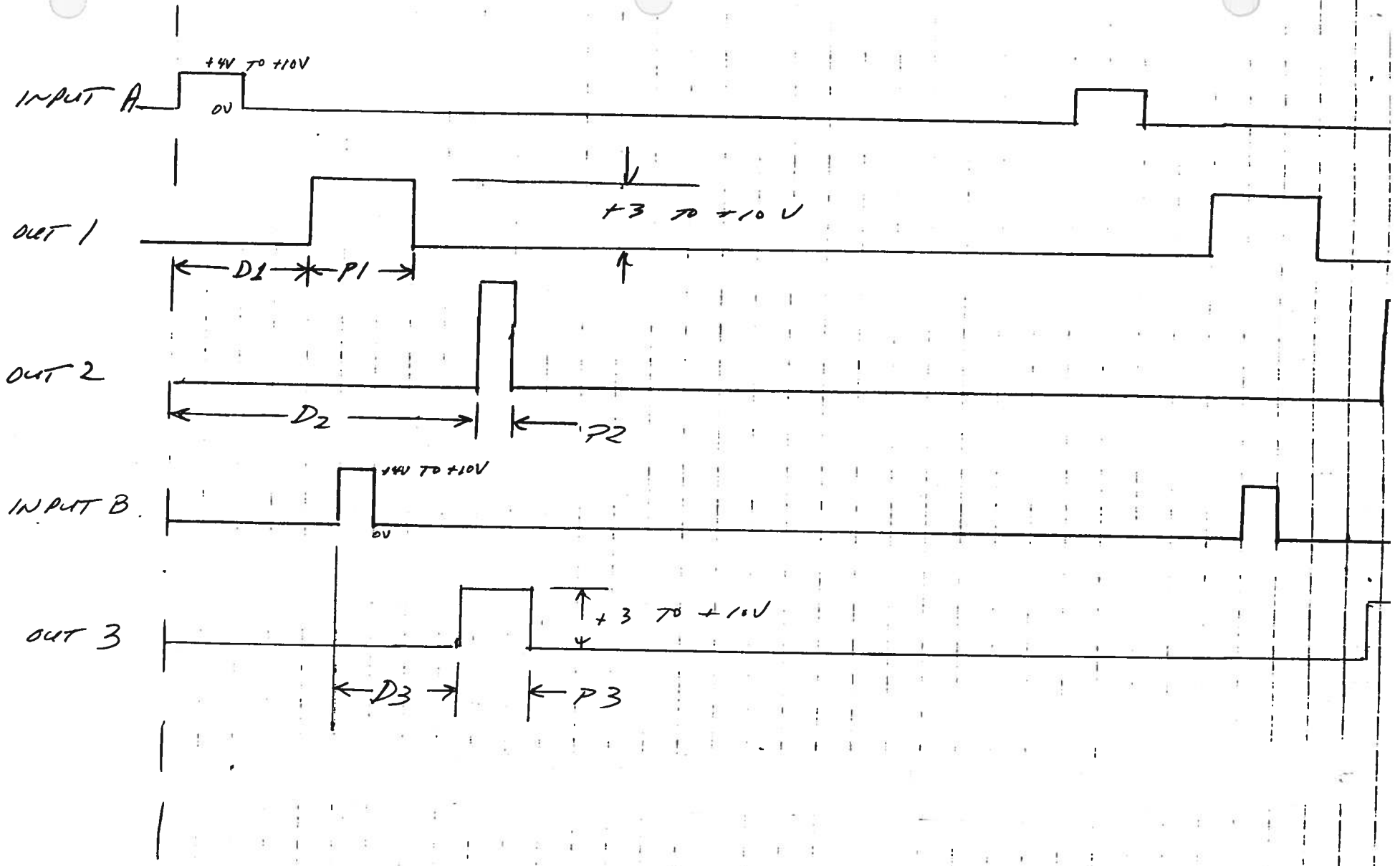


Fig 2: AD9-D3-P5-F0/CB WAVEFORMS

3) The output pulse width for each channel is controlled by the related ten turn pulse width control.

4) The output amplitude for each channel is controlled by the related one turn amplitude control.

5) The relative delay between the output channels and the input triggers are controlled by the related ten turn delay controls.

6) AVX-D3-PS units with a serial number higher than 5600 are protected by an automatic overload protective circuit which controls the front panel overload light. If the unit is overloaded (by operating at an exceedingly high duty cycle or by operating into a short circuit), the protective circuit will turn the output of the instrument OFF and turn the indicator light ON. The light will stay ON (i.e. output OFF) for about 5 seconds after which the instrument will attempt to turn ON (i.e. light OFF) for about 1 second. If the overload condition persists, the instrument will turn OFF again (i.e. light ON) for another 5 seconds. If the overload condition has been removed, the instrument will turn on and resume normal operation. Overload conditions may be removed by:

   1) Reducing PRF (i.e. switch to a lower range)
   2) Reducing pulse width (i.e. switch to a lower range)

   Note that repeatedly operating the unit into a short circuit may result in damage to the output stage and that operating at duty cycle (ratio of PW to PERIOD x100%) above 10% may also result in damage to the unit.

7) The unit can be converted from 110 to 220V 50-60 Hz operation by adjusting the voltage selector card in the rear panel fused voltage selector cable connector assembly.

8) For additional assistance:

   Tel: (613) 226-5772
   Fax: (613) 226-2802

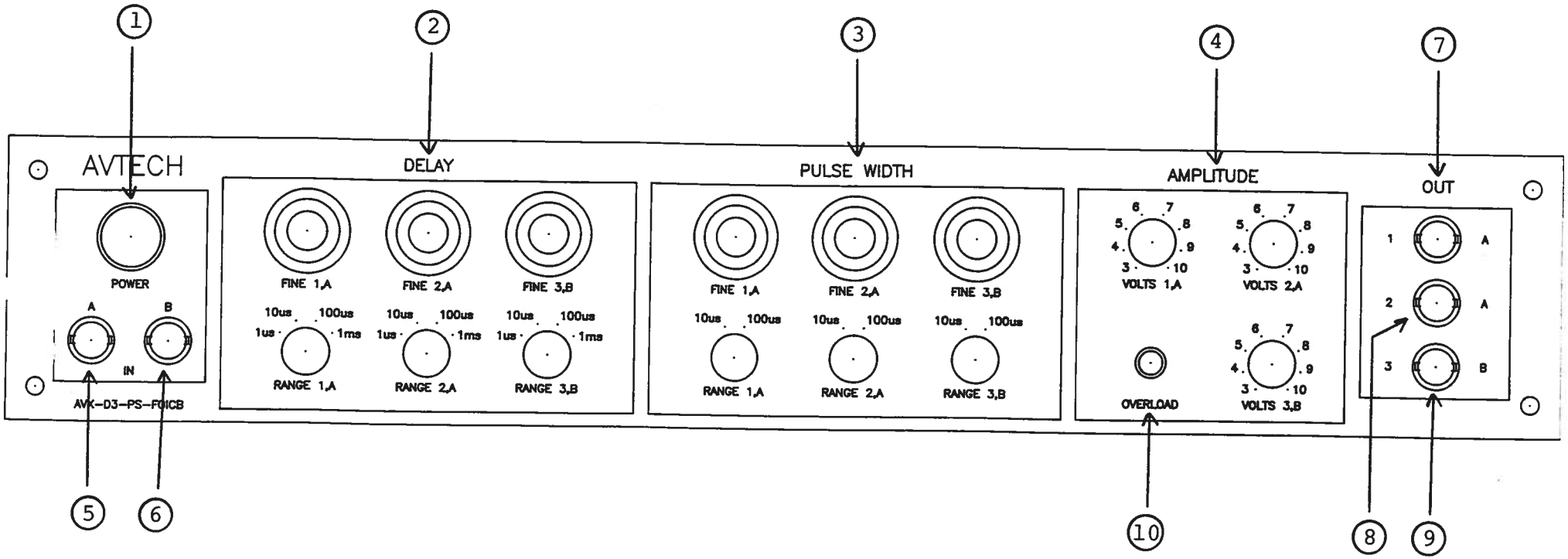


Fig. 3 FRONT PANEL CONTROLS

(1) ON-OFF Switch. Applies basic prime power to all stages.

(2) DELAY. One ten turn control per channel for controlling the delay (1 us to 1 ms) with respect to the input trigger.

(3) PULSE WIDTH. One ten turn control per channel for adjusting the output pulse width from 0.5 to 20 us.

(4) AMPLITUDE. A one turn control (for each channel) for varying the output amplitude from +3 to +10 Volts (to R_L = 50 Ohms).

(5) IN A. BNC connector to which the input trigger for channels 1 and 2 is applied.

(6) IN B. BNC connector to which the input trigger for channel 3 is applied.

(7) OUT 1A. BNC connector provides output for channel 1 to 50 Ohms.

(8) OUT 2A. BNC connector provides output for channel 2 to 50 Ohms.

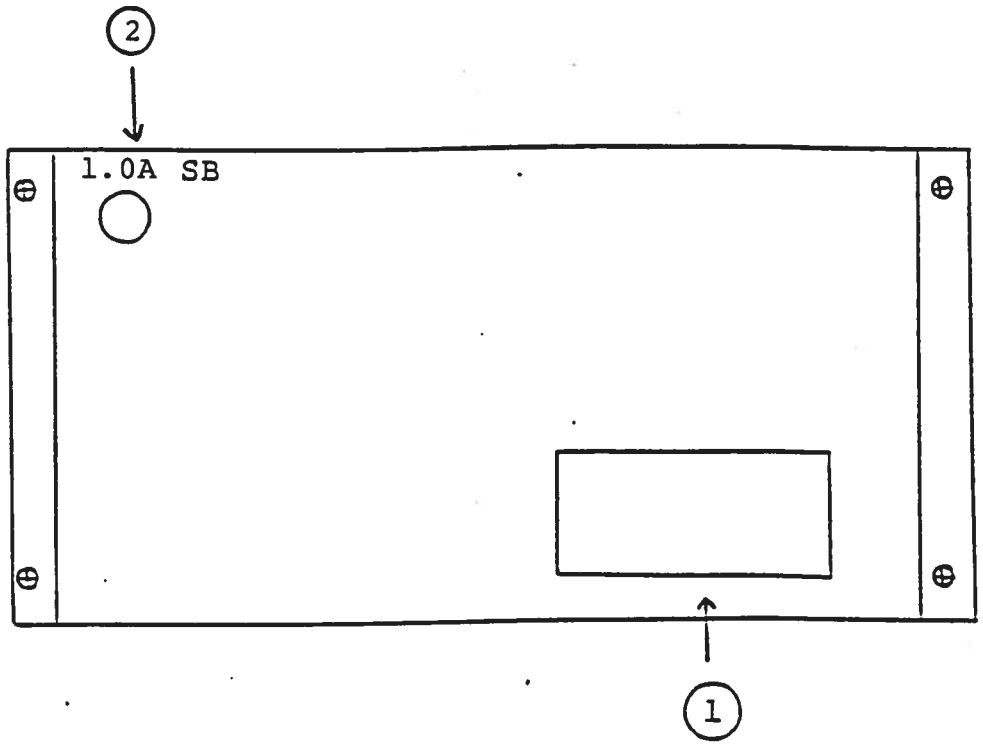
(9) OUT 3B. BNC connector provides output for channel 3 to 50 Ohms.

(10) OVERLOAD. AVX-D3-PS-FOICB units with a serial number higher than 5600 are protected by an automatic overload protective circuit which controls the front panel overload light. If the unit is overloaded (by operating at an exceedingly high duty cycle or by operating into a short circuit), the protective circuit will turn the output of the instrument OFF and turn the indicator light ON. The light will stay ON (i.e. output OFF) for about 5 seconds after which the instrument will attempt to turn ON (i.e. light OFF) for about 1 second. If the overload condition persists, the instrument will turn OFF again (i.e. light ON) for another 5 seconds. If the overload condition has been removed, the instrument will turn on and resume normal operation. Overload conditions may be removed by:

1) Reducing PRF
2) Reducing pulse width

Fig. 3

BACK PANEL CONTROLS



(1) FUSED CONNECTOR, VOLTAGE SELECTOR. The detachable power cord is connected at this point. In addition, the removable cord is adjusted to select the desired input operating voltage. The unit also contains the main power fuse (0.5A SB).

(2) 1.0 A SB. Fuse which protects the output stage if the output duty cycle rating is exceeded.

TOP COVER REMOVAL AND RACK MOUNTING

1) The interior of the instrument may be accessed by removing the four Phillips screws on the top panel. With the four screws removed, the top cover may be slid back (and off).

2) The -R5 rack mount kit may be installed after first removing the one Phillips screw on the side panel adjacent to the front handle.

SYSTEM DESCRIPTION AND REPAIR PROCEDURE

The AVX-D3-PS-FOICB unit consists of the following basic modules:

1) -PG1, 2 and -PG3 pulse generator modules (two)
2) +24V power supply board
3) -15V power supply module
4) -OL overload module

The modules are interconnected as shown in Fig. 4.

In the event of an instrument malfunction, it is most likely that the 1.0 A slow blow fuse or the main power fuse on the rear panel has blown. Replace if necessary. If the unit still does not function, it is most likely that one of the -PG modules may have failed due to an output short circuit condition or to a high duty cycle condition. The unit then should be returned to the factory for servicing.

Feb. 9/95

Disk: AVX-D, AVX-F

Name: 3PSF01CB.INS